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September 15th, 2015

Scott Mathias
Associate Director
Air Quality Policy Division
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

Re: Air Dispersion Modeling of Illinois Sulfur Dioxide Pollution

Dear Associate Director Mathias,

Sierra Club urges the U.S. Environmental Protection Agency to designate the areas surrounding the Newton, Joppa, and Marion coal-fired power plants as nonattainment under the sulfur dioxide ("SO_2") National Ambient Air Quality Standard ("NAAQS"). Air dispersion modeling recently conducted by Wingra Engineering, S.C. on behalf of Sierra Club demonstrates that ambient air concentrations in these areas exceed the NAAQS, which is the maximum concentration of air pollution allowed to protect public health.

First, air dispersion modeling demonstrates that SO_2 emissions from the Marion Generating Station in Illinois have caused downwind SO_2 ambient air concentrations to exceed the 75 parts per billion, or 196 micrograms per cubic meter, NAAQS. In particular, the modeling of actual emissions from this facility alone shows peak concentrations as high as 288.8 micrograms per cubic meter. Accordingly, the U.S. Environmental Protection Agency should designate the area surrounding the Marion coal-fired power plant as nonattainment under the NAAQS.

Second, air dispersion modeling demonstrates that actual SO_2 emissions from the Joppa coal-fired power plant in Illinois have caused downwind peak SO_2 ambient air concentrations as high as 222 micrograms per cubic meter. When the actual emissions on two other sources of SO_2 that are located within 50 kilometers of the Joppa Steam Electric Station are included, the peak concentration is as high as 250.4 micrograms per cubic meter. Therefore, the U.S. Environmental Protection Agency should also designate the area surrounding the Joppa coal-fired power plant as nonattainment under the NAAQS.

Finally, air dispersion modeling demonstrates that SO_2 emissions from the Newton Power Station, along with actual emissions from another large SO2 source that is within 50 kilometers of the plant, also have caused downwind SO_2 ambient air concentrations to exceed the NAAQS. Specifically, the modeling shows cumulative peak concentrations for Newton Power Station as high as 535.8 micrograms per cubic meter. Accordingly, the U.S. Environmental Protection Agency should designate the area surrounding the Newton coal-fired power plant as nonattainment under the NAAQS.

Enclosed, please find the results of the modeling analyses, along with the corresponding modeling input and output files.

Sierra Club urges the U.S. Environmental Protection Agency to consider this information as it undertakes area designations in Illinois for the 2010 revised primary SO_2 NAAQS. This information is also being provided to both EPA Region 5 and to appropriate personnel at the Illinois Environmental Protection Agency. In the meantime, please let us know if we can provide any additional information.

Thank you for your attention to and consideration of this matter, and please do not hesitate to contact us if you would like to discuss further.

Sincerely,

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